

# Nuclear vs. Chemical Reactions

	Chemical	Nuclear
What part of the atom is involved?	Outermost electrons	Protons and neutrons in the nucleus
How is the reaction started?	Atoms are brought close together with high temperature or pressure, or catalysts, or by increasing concentrations of reactants	High temperature is required or atoms are bombarded with high-speed particles
What is the outcome of the reaction?	Atoms form ionic or covalent bonds	The number of protons and neutrons in an atom usually changes and/or energy is released
How much energy is absorbed or released?	A small amount	A huge amount
What are some examples?	Burning fossil fuels, digesting food, making medicines and commercial products	Generating nuclear energy, treating cancer, irradiating food to sterilize it, the Sun generating heat and light